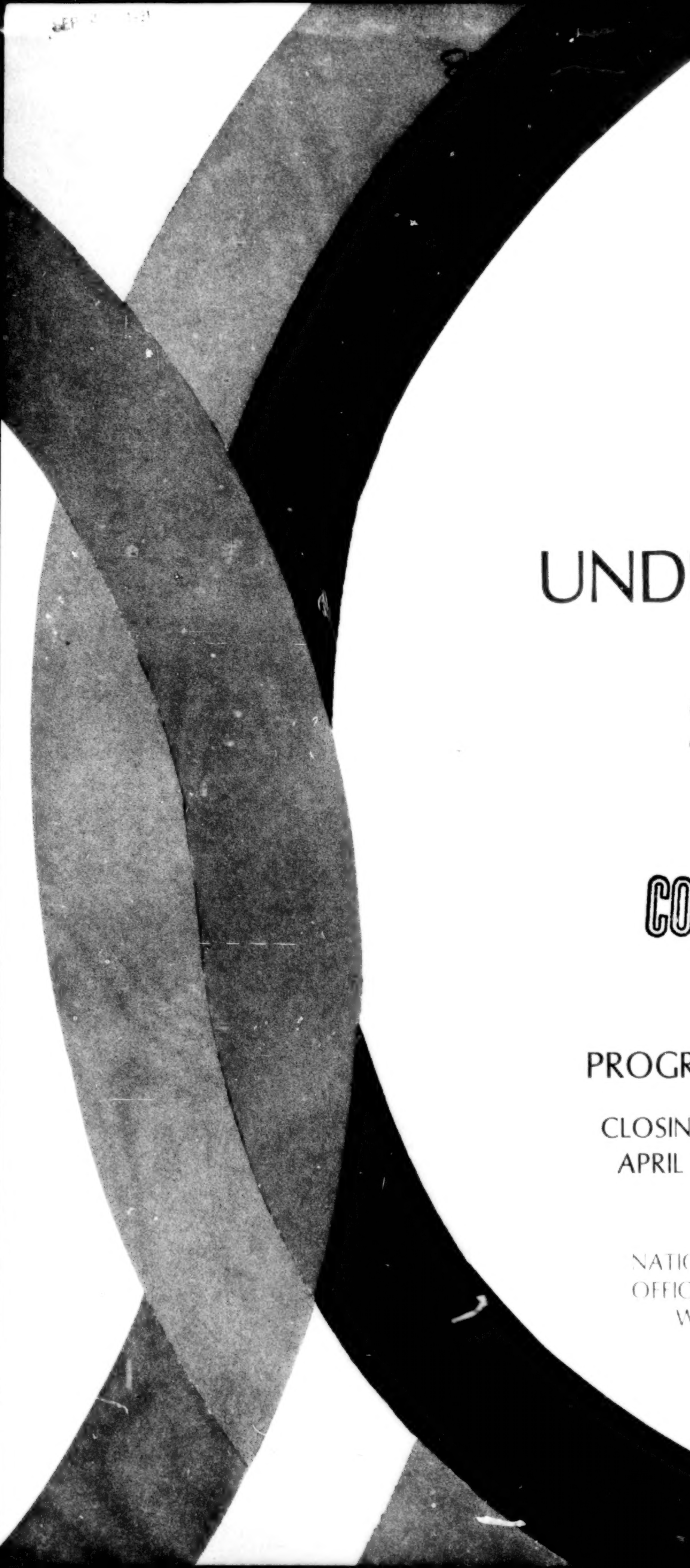
NS 1.2: P96/2/978

ORIGINAL



PUBLIC UNDERSTANDING OF SCIENCE

COMPLETED

PROGRAM ANNOUNCEMENT

CLOSING DATES FOR PROPOSALS:
APRIL 1, AUGUST 1, DECEMBER 1

NATIONAL SCIENCE FOUNDATION
OFFICE OF SCIENCE AND SOCIETY
WASHINGTON, D.C. 20550

OFFICE OF SCIENCE AND SOCIETY

The National Science Foundation has established the Office of Science and Society to respond to the issues arising out of the changing relationship between the scientific and technological communities and the larger society. The general purpose of the Office is to bring about greater understanding of this relationship and to help in solving ethical and social issues connected with science and technology.

In pursuing this purpose the Foundation seeks to respond to such questions as:

- How can the work of scientists and engineers, and the implications and consequences of their work, be clarified for the public?
- How can citizens who are not themselves scientists participate effectively in deciding issues of public policy that have important scientific and technological components?
- How and by whom are decisions made about the direction of scientific activities and the resources invested in them, and how should these decisions be made in a democratic society? Against what ethical and social standards can and should such decisions be judged?

Each of the OSS programs approaches these questions in different ways. The primary focus of the Public Understanding of Science (PUOS) program is on improving the content and processes of communication between the scientific and the nonscientific communities. The primary focus of the Ethics and Values in Science and Technology (EVIST) program is on identifying, understanding, and helping to resolve the ethical and social dilemmas that arise in the work of scientists and engineers and in their interaction with citizens affected by their work. The primary purpose of the Science for Citizens (SFC) program is to increase the knowledgeable participation of both scientists and nonscientists in the resolution of major public issues involving science and technology.

For further information about these programs, write to:

Office of Science and Society
National Science Foundation
Washington, D.C. 20550

PUBLIC UNDERSTANDING OF SCIENCE

CONTENTS

INTRODUCTION ... 1

PROJECT CATEGORIES ... 2

PREPARATION AND SUBMISSION OF PROPOSALS ... 3

  Who May Submit ... 3
  Preliminary Proposals ... 3
  Formal Proposals ... 3
  Submission of Proposals ... 5
  Evaluation of Proposals and Access to Peer Review Information ... 5

OTHER CONSIDERATIONS IN SUBMITTING PROPOSALS ... 6

  Assurance of Compliance with Civil Rights Act ... 6
  Grantee Organization and Management Data ... 6
  Confidential Aspects of Proposals and Awards ... 6
  NSF Evaluation of Programs ... 6
  Contracting or Transferring the Project Effort ... 6
  Consultant Services ... 7

PROJECT AND AWARD MANAGEMENT ... 7

  Grant Administration ... 7
  Changes in Project Operation ... 7
  Project Time Extensions ... 7
  Data Collection ... 8
  Publications ... 8
  Reporting Requirements ... 8

APPENDICES

  Proposal Cover Sheet ... 10
  Project Summary Form ... 11
  Summary Proposal Budget ... 12
  PUOS Proposal Review Criteria ... 14
  Simplification of NSF Reporting Requirements ... 15

INTRODUCTION

The complexity of modern science and the rapid pace of technological change have significantly altered traditional relationships between the scientific and technological communities and the larger society. Science now pervades many aspects of our lives, and we are called upon more and more often to make judgments on personal and social issues that have important scientific and technological components. These judgments require an understanding of the content, processes, and consequences of scientific work. But a widening gap has appeared between the understanding of these matters that is available to specialists and what is known about them by the general public. This gap must be reduced if citizens are to participate effectively in the decisions they are called upon to make.

Accordingly, the Public Understanding of Science (PUOS) program is directed toward two principal goals:

- An increased public understanding of the scientific and technological components of major issues of public policy and personal judgment, and
- An increased public understanding of the methods and activities of scientists and engineers and their effects upon our lives.

In support of these principal goals the program has several secondary objectives:

- To improve the scope, quality, and quantity of communication between scientists and nonscientists, and
- To facilitate and improve the processes of public communication about science.

In seeking to achieve these objectives, PUOS particularly encourages proposals with the following characteristics:

- High cost effectiveness
- Effective communication to a substantial and significant audience
- Importance that goes beyond specialized or parochial interests, either in the scope of the proposal itself or in its potential transferrability and extension to larger purposes
- Target audiences that are not effectively reached by existing informal education programs
- Use of innovative modes of communication

The PUOS Program is addressed to the general public. Its limited funds must be devoted primarily to initiating rather than sustaining activities. Support generally will not be given to projects that involve long-term institutional support, or are addressed to the needs of decisionmakers rather than the general public, or that emphasize communication among scientists themselves. Similarly, the Program does not support projects intended mainly for the construction of facilities or the purchase of equipment.

The public understanding of science requires the balanced consideration of opposing viewpoints on issues of public policy, as well as scientific authority and skill in interpreting them to lay audiences. The program will not support activities intended to support the already-determined policy positions of individuals or organizations, or to promulgate specific dogmas or promote particular technologies.

Since the Program is directed toward informal education, it does not support course and curriculum development or other activities that are part of the formal educational system unless they are incidental to the achievement of other Program goals. (Proposals for the development of courses and curricula may be submitted to the Science Education Development and Research Division of NSF.)

PROJECT CATEGORIES

The categories that follow are intended to illustrate the variety of activities that are eligible for support by the PUOS Program. The order in which they appear is roughly that of the priority each type of activity will receive for support, but the list is not intended to exclude imaginative proposals consistent with Program objectives that may lie in any of the categories or outside them all.

1. IMPROVING THE PUBLIC UNDERSTANDING OF SCIENCE

This category includes all projects concerned directly with improving the understanding among the general public of the processes and activities of science and technology, especially with respect to major issues of personal and public concern. Any aspect of scientific and technological endeavor may be involved. Such projects—which must be addressed to the general public or to important segments of the public—may include:

- Radio and television programs
- Newspaper and magazine reporting and other written presentations
- Museum and science center exhibits and activities
- Dramatic and film presentations
- Lectures, workshops and popular science activities

Proposals in this category should take particular care to define the size and nature of the audience for which they are intended, to provide realistic assurances that the desired audience wil be reached, and to describe how objectivity and balance of content will be achieved.

2. IMPROVING MODES OF COMMUNICATION WITH THE PUBLIC

This category includes all projects intended to increase the scope, level and quantity of communication between scientists and nonscientists. Any and all modes of communication with the public are eligible for support, including (but not limited to) projects that are designed to:

- Increase the effective participation of scientists and engineers in meeting public needs for information
- Improve the scientific background and skills of newspaper, radio and television editors, reporters and commentators
- Improve the skills of professional science writers
- Improve the ability of existing channels of communication to interpret and distribute scientific information to the public
- Develop innovative mechanisms to communicate more effectively with the public

3. STUDIES OF THE COMMUNICATION OF SCIENTIFIC INFORMATION TO THE PUBLIC

This category includes applied research and analysis which can contribute directly to the activities described above. Projects may include (but are not limited to):

- Studies of the nature and interests of different public audiences
- Evaluation of the costs and benefits and the comparative impact of alternative channels and techniques of public communication.

PREPARATION AND SUBMISSION OF PROPOSALS

WHO MAY SUBMIT

Proposals may be submitted by colleges, universities, laboratories, museums, State and local government agencies, professional associations and societies, citizens' groups and other profit and nonprofit organizations interested in improving the public understanding of science. Proposals from individuals acting independently of institutional sponsorship will be considered only under exceptional circumstances.

PRELIMINARY PROPOSALS

Preliminary proposals enable the staff to determine whether a project is relevant to the Program's objectives and to provide assistance to the applicant in the preparation of a formal proposal. For these reasons, any formal proposal submitted without a preliminary proposal having first been submitted to NSF will be considered to be a preliminary proposal and processed as such. Preliminary proposals may be submitted at any time and the Program will make every effort to respond within eight weeks of their receipt. However, formal proposals are reviewed three times each year, and preliminary proposals received less than two months before each such review are normally deferred until the next period.

A preliminary proposal should be no longer than 5 pages and should treat each of the following topics:

1. statement of problem or need for project
2. plan of activities, including time schedule and procedures for selecting content and assuring balance, objectivity, and accuracy
3. anticipated results and impact
4. qualifications of staff
5. for forums and workshops: selection criteria for speakers, participants, and topics
6. tentative budget.

If you have never received an NSF grant, please indicate this in your preliminary proposal so we can send you a list of the information about your organization that should be submitted with your formal proposal.

Three (3) copies of each preliminary proposal should be sent directly to:

Public Understanding of Science
Office of Science and Society
National Science Foundation
Washington, D.C. 20550

FORMAL PROPOSALS

Formal proposals will be considered three times each year, with deadlines of April 1, August 1, and December 1.

A formal proposal should consist of the following items, assembled in the order shown:

1. Cover Sheet

A completed cover sheet (see Appendix A) should be used as the first page of each submitted copy of the proposal. Each formal proposal must be signed by both the proposed project director or principal investigator and the head or authorized representative of the grantee institution.

Social security numbers are used by the Foundation to monitor and facilitate the receipt and processing of proposals, as well as to maintain award data. The number is solicited pursuant to the general authority of the Foundation under the NSF Act of 1950, as amended. However, submission of social security numbers is voluntary and refusal to disclose a number will not affect an institution's eligibility for award.

Due to the time required for reviewing and processing proposals, the starting date of a project should not normally be scheduled earlier than six months after the submission of a formal proposal.

2. Table of Contents

3. Project Summary

This should be submitted on the form provided in Appendix B. It should be a self-contained condensation of the narrative written so as to be intelligible to a reader who has no scientific training. It should contain a minimum of technical terminology and include a statement of objectives, an outline of project operations, and a description of anticipated outcomes. In the case of a continuing project, the abstract should contain a summary of work completed as well as a description of work to be accomplished under the new proposal.

4. Narrative

This section should not exceed 10 double-spaced pages. Applicants are advised to consult the Proposal Review Criteria (Appendix D) in preparing this section.

The narrative should include discussion of the following points:

1. Project and Program Objectives: State the goals and anticipated outcomes of the project, with an explanation of how they satisfy PUOS objectives.
2. Project Design: Explain the methods to be used and the activities to be undertaken. An analysis should be provided of the current state of knowledge or performance with respect to the goals of the proposal. Scientific, social, and educational aspects of the project should be considered. If the proposal is for continuation of a previous grant, describe what has been done to date and indicate what is to be accomplished under the new award.
3. Monitoring and Evaluation Plan: Discuss the anticipated audience size and nature and note how this will be confirmed and reported. Summarize the anticipated outcomes of the project and indicate how these outcomes will be assessed and reported.
4. Organization and Management Plan: Describe the administrative mechanisms that will be used to organize and manage the project, including any subcontract or consultant arrangements. Potential income-producing aspects of the project should be noted.
5. Utilization: Explain how the products or outcomes of the project will be used or disseminated. Discuss the anticipated distribution pattern as well as the size and nature of the anticipated audience and impact. Indicate past experience and other factors which substantiate this expectation. Unless sound reasons indicate otherwise, all proposals to produce audio-visual material should include the deposit of an appropriate reproduction master with the National Audio-Visual Center.

5. Work Plan

This should summarize, in a table or diagram, the scheduling of project tasks and milestones, including estimates of funds, time, personnel, facilities, and equipment allocated to each stage of the project. Progress and other reports, advisory committee meetings, and similar events should be included.

6. Budget

A Budget should be prepared and submitted using the form provided in Appendix C. Significant or unusual items in the budget should be fully explained or justified, either as budget notes or in the text of the proposal.

Listed costs of the various line items should be known costs insofar as possible; estimates should be given only when it is impossible to ascertain actual costs. Nonspecific items grouped as "miscellaneous" or "contingency funds" should not be included. The budget should not include items for expenses incurred before the date of the award, such as staff time required to prepare the proposal or to make initial preparations for a conference. If funds from other sources are to be used, these sources must be identified and an itemized budget for the expenditure of these funds should be provided as a supplement to that budget which the Foundation is requested to support.

Budgets should specifically list, as separately numbered items, any permanent, special purpose equipment that will cost $1,000 or more. Do not include general purpose equipment such as office equipment and furnishings. Travel allowances may not normally exceed round-trip jet economy air fares. Simple subcontracts may be explained under "Other Costs"; complex subcontracts should be listed under "Other Costs" but should be described on a separate budget form. The proposing institution is entitled to indirect costs at the rate approved for that institution, which can be obtained from its business office. For profit-making organizations, no fee will be provided.

7. Fiscal Discussion

The budget should, of course, reflect the narrative portion of the proposal and vice versa.

However, additional pages should be added as necessary to provide explanation of budget items.

8.Personnel Description

A curriculum vitae should be presented for each person of significance to the project (whether actually receiving support or not). Each vitae should contain the following information: name, degrees (subject, institution, and date), professional experience (activity, institution, and date), and evidence of achievement (recent publications, papers, films, exhibits, awards, etc., limited to one page). List anticipated advisors and consultants, or if not chosen, describe the criteria to be used and suggest examples.

The Foundation considers the competence of the project director to be of particular significance to the likelihood of project success. It is expected that the position will, in general, be occupied by an experienced professional of demonstrated administrative ability, and that he or she will be directly involved in project activities to a significant degree.

Each proposal must list all current projects, in addition to the proposed project, to which the senior personnel have committed a portion of their time, whether or not salaries for the persons involved are included in the budgets of the various projects. This information should include all titles and dates of current grants or contracts, the source of funds, annual budget levels, and the man-months devoted to each project by each of the senior personnel. The proposal must also provide analogous information for all other proposed projects which are being considered by, or which will be submitted in the near future to other possible sponsors including other Foundation programs. Concurrent submission of a proposal to other organizations will not prejudice its review by the Foundation.

9.Appendices

The narrative should provide sufficient information so that a reviewer unfamiliar with the local context can arrive at valid judgments concerning the project. Additional supportive material may be included as appendices, but is not generally forwarded for evaluation by reviewers. Proposals concerned with film, television, or other media should include a sample of past work, mailed directly to the PUOS Program.

SUBMISSION OF PROPOSALS

Twenty copies of the formal proposal should be prepared by the prospective director of the project and submitted to the Central Processing Section of the Foundation by the proposing institution. The original signed cover sheet should serve as the letter of transmittal and the first page of the proposal. Each copy should be on standard (8½x11) paper, stapled in the upper left corner, but unbound. Pages are to be numbered at bottom center. The copies are to be submitted securely bound in a single package to:

Central Processing Section
Public Understanding of Science
National Science Foundation
Washington, D.C. 20550

To facilitate prompt acknowledgement of the arrival of the package at the Foundation, the proposer should cut out two postcards from the back cover of this guide, fill them in to identify the proposal, address one card to the project director and the other to the official authorized to sign the Cover Sheet, and attach them firmly to the Cover Sheet of the Signature Copy. When the package arrives, the date of receipt and an assigned proposal number will be stamped on the card before it is returned, so that the proposer and the Foundation may refer thereafter to this proposal number in correspondence about the proposal. If receipt is not acknowledged within two weeks of submission, the program staff should be contacted.

A separate information copy of the proposal should be sent directly to:

Public Understanding of Science
Office of Science and Society
National Science Foundation
Washington, D.C. 20550

EVALUATION OF PROPOSALS AND ACCESS TO PEER REVIEW INFORMATION

Formal proposals are reviewed by scientists, engineers, and professional and institutional leaders drawn from colleges, universities, research organizations, public service groups, government agencies, industry, professional societies, and the communications media, as appropriate. Proposals are also reviewed by a panel constituted of similar members. See Appendix D for PUOS proposal review criteria, which are presented to all reviewers. Awards reflect both the review criteria and program priorities which are intended to provide a coherent, balanced and effective communication pattern. Such priorities include the availability of funds; balance among differing media, audiences and subjects; emphasis on developing new channels of communication and broader impact; potential multiplier effects; etc.

After final decisions have been announced, the Foundation will, upon request, inform the project director of the reasons for its decision on a proposal. Verbatim copies of reviews, not including the identity of the reviewer, will be made available to project directors upon written request.

OTHER CONSIDERATIONS IN SUBMITTING PROPOSALS

ASSURANCE OF COMPLIANCE WITH CIVIL RIGHTS ACT

If the applicant institution has not filed an Assurance of Compliance with Title VI of the Civil Rights Act of 1964 as required by NSF regulations, pertinent forms and a copy of the regulations may be obtained by writing to the Foundation's Division of Grants and Contracts. The required Assurance Form, when completed by the institution, should be submitted to the Division of Grants and Contracts. Once an Assurance Form has been submitted by the applicant organization, it covers all proposals subsequently submitted by any department or other unit of that organization. Individual Assurance Forms are not necessary for each application or for each proposal. If there is some question as to whether an institution has filed an Assurance of Compliance, the institution's Business Office should be consulted.

GRANTEE ORGANIZATION AND MANAGEMENT DATA

Any prospective grantee organization that has not received an NSF grant within the past 2 years should fill out the Organization Management Information card on the back of the brochure and attach it to the original copy of the proposal.

CONFIDENTIAL ASPECTS OF PROPOSALS AND AWARDS

When a proposal results in an award it becomes part of the record of the Foundation's transactions, available to the public upon specific request. Information that the Foundation and the grantee mutually agree to be of a privileged nature will be held in confidence to the extent permitted by law; therefore, an applicant who wishes to have the Foundation consider any information as privileged should clearly mark it as such and send it in a separate statement, two copies of which should accompany the proposal.

A proposal that does not result in an award may be retained by the Foundation. Such a proposal will be released only (1) with the consent of the proposer or (2) to the extent required by law. A proposal may be withdrawn at any time prior to final action thereon by the Foundation.

NSF EVALUATION OF PROGRAMS

Proposers should be aware that the Foundation may, as a part of its own program evaluation activities, carry out in-depth evaluations of selected awarded projects through independent third parties. Thus, proposers should be prepared to cooperate with evaluators eventually retained by the Foundation to analyze both the institutional context and the impact of any supported project.

CONTRACTING OR TRANSFERRING THE PROJECT EFFORT

Excluding the purchase of commercially available supplies, materials, equipment, or general support services allowable under the grant, none of the research or substantive effort under an NSF grant may be contracted or otherwise transferred to another organization without prior NSF approval. Normally, the intent to so contract is fully disclosed in the proposal submission, and evidence of NSF prior approval appears in the grant instrument. In the event the need arises to so contract after a grant has been made, the grantee must submit to the NSF Grants Officer the proposed performance statement and budget, a statement indicating the basis for selection of the contractors and a justification and the proposed arrangement. The request must be signed by the Principal Investigator and endorsed by the Authorized Organizational Representative. NSF approval will be indicated as an amendment to the grant.

CONSULTANT SERVICES

1. Grantees normally are expected to utilize the services of their own officers or employees to the maximum extent in managing and performing the activities supported by NSF grants. Where it is necessary for a grantee to contract for the services of persons who are not its officers or employees, it is expected to do so in accordance with written organizational standards which provide for consideration of the factors outlined in the governing Federal cost principles.

2. If the need for consultant services is anticipated, the proposal narrative should provide appropriate rationale, and the Proposal Budget should estimate the amount of funds which may be required for this purpose. To the extent possible, consultant rates should show separate amounts for actual service and each of the components of the rate.

However, payment for a consultant's services may not exceed the daily equivalent of the maximum rate paid a U.S. Government GS-18 ($183/day) unless specifically authorized by law.

PROJECT AND AWARD MANAGEMENT

GRANT ADMINISTRATION

An NSF grant is normally made to an organization, known as the grantee, rather than to the individual principal investigator or project director who proposes to conduct the project. Notification of an award is made by a letter signed by the NSF Grants Officer which constitutes the award instrument. The grant establishes a relationship between NSF and the grantee in which:

1. NSF agrees to provide financial support to the project to be performed, under the provisions of the grant instrument.
2. The grantee agrees to the performance of the project, to the prudent management of the funds provided by the grant and to the provisions of the grant instrument.

The grantee is free to accept or reject the grant. Normally, action to obtain Federal funds constitutes acceptance of a grant once it is made. However, in some cases NSF may also require written acceptance.

CHANGES IN PROJECT OPERATION

Foundation approval must be obtained, in accordance with the award instrument and attachments thereto (FL-118), for major project changes, including those:

1. Affecting the overall intent or scope of the approved project.
2. Involving a change in Principal Investigator.
3. Involving a change in research equipment valued at $1,000 or more.
4. Involving a time extension for completion of grant activities.

Request for such changes should be addressed to the PUOS Program Director from the Principal Investigator and must be countersigned by the Authorized Organizational Representative.

Within the constraints noted above, chronological changes in expenditures *within* the total time period of the grant do not require Foundation approval.

PROJECT TIME EXTENSIONS

It is expected that projects will be completed within the time period specified in the award instrument. Therefore requests for no-cost time extensions should be submitted only under the most unusual of circumstances.

Requests for no-cost extensions must be received at least 45 days prior to the expiration date of the grant, and must be signed by both the Principal Investigator and the Authorized Organizational Representative. The letter must fully justify the need for the extension, and include a summary of progress to date, an estimate of the unobligated funds remaining, and a description of a plan for their use.

This plan must coincide with the original or amended objectives of the project. The fact that funds remain at the expiration of an award is not justification for an extension.

DATA COLLECTION

Data collection activities performed under an NSF grant are the responsibility of the grantee and NSF support of the project does not constitute NSF approval of the survey design, questionnaire content or data collection procedures. The grantee shall not represent to respondents that such data are being collected for or in association with the National Science Foundation or the Government without the specific written approval of such data collection plan or device by the Foundation. However, this requirement is not intended to preclude mention of NSF support of the project in response to an inquiry or acknowledgement of such support in any publication of this data.

PUBLICATIONS

1. Commercial Publication

Commercial publication or distribution of technical reports and other materials originating from a PUOS-supported project requires prior approval of NSF. As part of this procedure, NSF will review dissemination plans, selection of a publisher, and the proposed publishing agreement. These plans should be discussed several months prior to publisher selection dates.

2. Acknowledgement of Support and Disclaimer

An acknowledgement of support by the PUOS program must be made in connection with the publication of any material originating from a PUOS-supported project, to the effect that: "This project was supported by National Science Foundation Grant No. 00 in the NSF Public Understanding of Science Program."

Any materials, books, monographs, proceedings of symposia, or similar publications supported by an NSF grant must contain a statement, immediately following the acknowledgement, that contains an expression of the following: "Any opinions, findings, conclusions or recommendations expressed (herein) are those of the author(s) and do not necessarily reflect the views of the National Science Foundation."

3. Copyrights

Unless otherwise prohibited by the award instrument, the grantee is free to copyright the reports, data (excluding computer programs), books, publications, films, or other copyrightable materials developed in the course of or under an NSF grant. However, the U.S. Government retains a royalty-free, irrevocable, worldwide, nonexclusive license in these materials to reproduce, perform, translate, and otherwise use them, or to authorize others to use them for Government purposes, and to sell them through the National Technical Information Service (NTIS). In some cases it may be necessary to permit the grantee to allow an exclusive license to a publisher for a limited period of time in order to obtain proper distribution.

REPORTING REQUIREMENTS

1. Quarterly Reports

Brief, informal quarterly progress reports, describing current project status, are required from PUOS grantees. Copies of all films, videotapes and other published materials and significant interim working papers should be included with these reports.

2. Final Project Report

Within 90 days of the expiration of the grant, the grantee institution is required to submit a Final Project Report, NSF Form 98A. In the event additional information is required as a specific award, these requirements will be specified in the award instrument. Two copies of these documents should be sent to:

National Science Foundation
Division of Grants ad Contracts
Post-Award Projects Branch
1800 G Street, N.W.
Washington, D.C. 20550

The Final Project Report (NSF Form 98A) should include a brief (approximately 200 words) description of the project. The description must be self contained and intelligible to a nonscientific reader. Generally, the grantee should indicate the project's objectives and scope, the techniques or approaches used, and its major results and implications. The grantee should bear in mind that this Final Project Report may be used, together with the project summary prepared by NSF at the time of the award, to answer inquiries by nonscientists as to the nature and significance of projects which the Foundation supports. (See NSF Important Notice 73, Appendix E).

The grantee is no longer required to submit a separate Final Technical Report and a summary of Completed Project, or to send a copy of the Final Project Report to the cognizant NSF program. The formats of these reports are now combined in the single Form 98A (see instructions on reverse side). When the report is received in the Division of Grants and Contracts of NSF, a copy will automatically be forwarded to the program officer. The report should be clearly labeled with the grant number and other identifying information as appropriate. Dissemination of reports will be subject to agreement between NSF and the grantee, and, where appropriate, may be set forth in the award instrument.

3. Financial Report

A separate fiscal report is no longer required under an NSF grant. The Foundation will use the expenditure data reported in the quarterly Federal Cash Transactions Report (formerly known as the quarterly Expenditure Report) in lieu of a final fiscal report.

The Foundation's computerized version of the Federal Cash Transactions Report is forwarded to each grantee institution in the month following the close of each calendar quarter. Procedures for reporting are forwarded to grantees at the time an NSF award is made.

APPENDIX A

PROPOSAL TO THE NATIONAL SCIENCE FOUNDATION
Cover Page

FOR CONSIDERATION BY NSF ORGANIZATIONAL UNIT (Indicate the most specific unit known, i.e. program, division, etc.)	IS THIS PROPOSAL BEING SUBMITTED TO ANOTHER FEDERAL AGENCY? Yes ___ No ___ IF YES, LIST ACRONYM(S).
PROGRAM ANNOUNCEMENT/SOLICITATION NO.:	CLOSING DATE (IF ANY):

NAME OF SUBMITTING ORGANIZATION TO WHICH AWARD SHOULD BE MADE (INCLUDE BRANCH/CAMPUS/OTHER COMPONENTS)

ADDRESS OF ORGANIZATION (INCLUDE ZIP CODE)

TITLE OF PROPOSED PROJECT

REQUESTED AMOUNT	PROPOSED DURATION	DESIRED STARTING DATE
PI/PD DEPARTMENT	PI/PD ORGANIZATION	PI/PD PHONE NO.

PI/PD NAME	SOCIAL SECURITY NO.*	DATE OF HIGHEST DEGREE ACHIEVED*	MALE*	FEMALE*
ADDITIONAL PI/PD				
ADDITIONAL PI/PD				
ADDITIONAL PI/PD				
ADDITIONAL PI/PD				

FOR RENEWAL OR CONTINUING AWARD REQUEST, LIST PREVIOUS AWARD NO.	IF SUBMITTING ORGANIZATION IS A SMALL BUSINESS CONCERN, CHECK HERE ☐ (See CFR Title 13, Part 121 for Definitions)

* Submission of SSN and other personal data is voluntary and will not affect the organization's eligibility for an award. However, they are an integral part of the NSF information system and assist in processing proposals. SSN solicited under NSF Act of 1950, as amended.

CHECK APPROPRIATE BOX(ES) IF THIS PROPOSAL INCLUDES ANY OF THE ITEMS LISTED BELOW:

☐ Animal Welfare
☐ Endangered Species
☐ Historical Sites
☐ Human Subjects
☐ Marine Mammal Protection
☐ Pollution Control
☐ National Environmental Policy Act
☐ Research Involving Recombinant DNA Molecules
☐ Proprietary and Privileged Information

PRINCIPAL INVESTIGATOR/ PROJECT DIRECTOR	AUTHORIZED ORGANIZATIONAL REP.	OTHER ENDORSEMENT (optional)
NAME	NAME	NAME
SIGNATURE	SIGNATURE	SIGNATURE
TITLE	TITLE	TITLE
DATE	DATE	DATE

APPENDIX B

NOTICE OF RESEARCH PROJECT
SCIENCE INFORMATION EXCHANGE
SMITHSONIAN INSTITUTION
NATIONAL SCIENCE FOUNDATION
PROJECT SUMMARY

PROJECT NO. (Do not use this space)
NSF AWARD NO

1. NAME OF INSTITUTION (INCLUDE BRANCH/CAMPUS & SCHOOL OR DIVISION)
2. MAILING ADDRESS
3. PRINCIPAL INVESTIGATOR AND FIELD OF SCIENCE/SPECIALTY
4. TITLE OF PROJECT
5. SUMMARY OF PROPOSED WORK (LIMIT TO 22 PICA OR 18 ELITE TYPEWRITTEN LINES)

FOR NSF USE ONLY

DIVISION (OFFICE) AND DIRECTORATE	PROGRAM	
SECTION	PROPOSAL NO.	F.Y.

FOR OGC USE ONLY

START AND END DATES	AMOUNT GRANTED

NSF FORM 4 (7-78)

1. Proposal Folder
2. Program Suspense
3. Division of Grants & Contracts
4. Science Information Exchange
5. Principal Investigator
6. Off. of Govt. & Pub. Progs.
7. Assistant Director

APPENDIX C

SUMMARY
PROPOSAL BUDGET

ORGANIZATION AND ADDRESS	**FOR NSF USE ONLY** PROPOSAL NO.
PRINCIPAL INVESTIGATOR/PROJECT DIRECTOR	DURATION (MONTHS) PROPOSED / REVISED

NSF USE		NSF FUNDED MAN MONTHS			FUNDS REQUESTED BY PROPOSER	FUNDS GRANTED BY NSF (IF DIFFERENT)
	A. SENIOR PERSONNEL (LIST BY NAME; SHOW NUMBERS OF PEOPLE IN BRACKETS; SALARY AMOUNTS MAY BE LISTED ON SEPARATE SCHEDULE) GPM 205.1b	CAL.	ACAD	SUMR.		
	1. P.I./P.D.				$	$
	2. CO P.I./P.D.				$	$
	3. CO P.I./P.D.				$	$
	4. CO P.I./P.D.				$	$
	5. CO P.I./P.D.				$	$
11115	6. ( ) ◄ SUBTOTALS A1 - A5 ►				$	$
	FACULTY AND OTHER SENIOR ASSOCIATES (ATTACH EXTRA SHEET IF NECESSARY)					
	7.				$	$
	8.				$	$
	9.				$	$
	10.				$	$
	11.				$	$
11117	12. ( ) ◄ SUBTOTALS A7 - A11 ►				$	$
	B. OTHER PERSONNEL (LIST NUMBERS IN BRACKETS)					
11141	1. ( ) POSTDOCTORAL ASSOCIATES				$	$
11149	2. ( ) OTHER PROFESSIONALS				$	$
11150	3. ( ) GRADUATE STUDENTS				$	$
11152	4. ( ) UNDERGRADUATE STUDENTS				$	$
11182	5. ( ) SECRETARIAL - CLERICAL				$	$
11183	6. ( ) TECHNICAL, SHOP, OTHER				$	$
	TOTAL SALARIES AND WAGES (A+B)				$	$
11200	**C. FRINGE BENEFITS** (IF CHARGED AS DIRECT COSTS)				$	$
	TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A+B+C)				$	$
	D. EQUIPMENT (LIST ITEMS AND DOLLAR AMOUNTS FOR EACH ITEM)					
23181	TOTAL EQUIPMENT				$	$
	E. MATERIALS AND SUPPLIES					
32630					$	$
	F. DOMESTIC TRAVEL					
42111					$	$
	G. FOREIGN TRAVEL (LIST DESTINATION AND AMOUNT FOR EACH TRIP; GPM 731)					
42112					$	$

PAGE 1 OF 2 PAGES

SUMMARY PROPOSAL BUDGET

PROPOSAL NO.

52500	**H. PUBLICATION COSTS/PAGE CHARGES**	$.	$
62315	**I. COMPUTER (ADPE) SERVICES**	$	$
	J. CONSULTANT SERVICES (IDENTIFY CONSULTANTS BY NAME AND AMOUNT; GPM 516)	▨	▨
		$	$
	K. PARTICIPANT SUPPORT COSTS, IF ALLOWED BY PROGRAM GUIDE (ITEMIZE) GPM 518	▨	▨
	1. STIPENDS $ ______	▨	▨
	2. TRAVEL $ ______	▨	▨
	3. SUBSISTENCE $ ______	▨	▨
	4. OTHER - SPECIFY $ ______	▨	▨
	5. TOTAL PARTICIPANT COSTS (K1 + K2 + K3 + K4)	$	$
	L. ALL OTHER DIRECT COSTS (List items and dollar amounts. Details of subcontracts, including work statements and budget, should be explained in full in proposal.) $ ______ $ ______ $ ______ $ ______	▨	▨
65001	TOTAL OTHER DIRECT COSTS	$	$
	M. TOTAL DIRECT COSTS (A THROUGH L)	$	$
	N. INDIRECT COSTS (Specify rate(s) and base(s) for on/off campus activity. Where both are involved, identify itemized costs included in on/off campus bases in remarks.)	▨	▨
74100	TOTAL INDIRECT COSTS	$	$
	O. TOTAL DIRECT AND INDIRECT COSTS (M + N)	$	$
74500	**P. LESS RESIDUAL FUNDS** (If for further support of current project; GPM 252 and 253)	$	$
75000	**Q. AMOUNT OF THIS REQUEST** (O MINUS P)	$	$

REMARKS

NOTE: SIGNATURES REQUIRED ONLY FOR REVISED BUDGET (GPM 233). THIS IS REVISION NO.

SIGNATURE OF PRINCIPAL INVESTIGATOR/PROJECT DIRECTOR	DATE OF SIGNATURE	TYPED OR PRINTED NAME AND TITLE
SIGNATURE OF AUTHORIZED ORGANIZATIONAL REPRESENTATIVE	DATE OF SIGNATURE	TYPED OR PRINTED NAME AND TITLE

FOR NSF USE ONLY

INDIRECT COST RATE VERIFICATION			PROGRAM OFFICER APPROVAL
Date Checked	Date of Rate Sheet	Signature	

Grant Number	Amend No.	Institution	Organization	Fund Acct.	Program	Object	

	Proposal Number	Dur.	Chg.	Award Date	Proposed Amount	Prpsd. Dur.	

PAGE 2 OF 2 PAGES

APPENDIX D

PUOS PROPOSAL REVIEW CRITERIA

Proposals to the PUOS Program are reviewed both by mail reviewers and by a review panel. Mail reviewers are asked to address themselves particularly to the specific activities and content of the proposal, applying appropriate elements of the list of criteria below as part of their evaluation. Panel reviewers bear an added responsibility for weighing program priorities and suggesting an appropriate allocation of the available funds.

1. **RATIONALE.** Are the project objectives clear and relevant to the goals of PUOS? Has the proposer identified an important need, problem, or issue in public understanding of science? Have the proposers demonstrated knowledge of the area of concern that is pertinent, current, and complete? Is the rationale supporting the project adequate to justify the investent of Federal funds?

2. **PROJECT DESIGN.** Does the proposal articulate a well-formulated plan of attack on the problem identified? Is the proposed approach a practical and effective way to solve the problem? Are the management plan and the dissemination plan well conceived.

3. **IMPACT.** Is there evidence that project outcomes will have an effect on the target audience? Is the character and size of the audience significant for PUOS? Is the target audience one that is not effectively reached by existing informal education programs? Will the project explore innovative modes of communication that have potential for transfer or adaptation in other settings?

4. **COST-EFFECTIVENESS.** Is it likely that project outcomes will be cost-effective? Will the improvements in public understanding justify the cost?

5. **MONITORING AND EVALUATION.** Is there a good procedure for assessing the outcome of the project? Are there suitable plans for obtaining reliable and unbiased information on the effectiveness of the project?

6. **PERSONNEL AND INSTITUTIONAL RESOURCES.** Is the staff well qualified to carry out the roles asigned to them? Are the services and conditions necessary to support the project activities available?

7. **BUDGET.** Are the costs of the project—salaries, services, and other expenses—reasonable? Does the budget reflect understanding of the magnitude of the task?

8. **QUALITY.** Does the activity have intrinsic merit? Does the conceptualization of the problem and the proposed solution show imagination and creativity? Are high quality resources to be employed in attacking the problem? Will the results promised significantly improve some aspect of the public understanding of science?

APPENDIX E

NATIONAL SCIENCE FOUNDATION
Office of the Director
Washington, D.C. 20550

Notice No. 73 May 8, 1978

IMPORTANT NOTICE TO PRESIDENTS OF UNIVERSITIES AND COLLEGES AND HEADS OF OTHER NATIONAL SCIENCE FOUNDATION GRANTEE ORGANIZATIONS

Subject: **Further Simplification of NSF Reporting Requirements and Enforcement of these Requirements**

For some time, the National Science Foundation has required three reports for all completed grants: a Financial Status Report; a Summary of Completed Project; and a Final Technical Report. In 1977, the Foundation announced a proposed simplification of final fiscal reporting through the use of NSF's computerized Federal Cash Transactions Report which is distributed quarterly for completion by grantees. I am pleased to note that the new reporting system received very favorable comments from grantees. It has just been implemented with the FCTR for the period ending March 31, 1978 and individual Financial Status Report forms are no longer required.

A final technical report has been a long-standing requirement for NSF awards. It contains the scientific information needed by NSF program managers to monitor the results of projects within their areas of responsibility. The Summary of Completed Project was introduced in 1976 as a mechanism for informing the Congress and the general public about the results of NSF-funded research. In addition to being supplied to the Congress and the public in response to requests for information, the abstracts are published annually.

Along with our review of fiscal reporting in 1977, we initiated a review of the data elements required by NSF in the Summary of Completed Project and the final technical report with a view to simplifying these requirements as well. The review indicated that some of the information required in the two reports is identical or similar. Accordingly, we have now redesigned the formats of these reports to combine the common elements into a single form. Copies of the new format and the associated instructions are attached for local reproduction and immediate use. Along with a reduction in duplicate reporting elements, the new form recognizes the fact that some information may not be available at the same time the report is due. The form provides blocks for the principal investigator to check to indicate the submission status of these items.

With this change, the Foundation considers it has reduced its reporting requirements to an absolute minimum consistent with adequate accountability for the use of public funds. We have tried to make the reporting as simple and convenient as possible. Principal Investigators and grantee institutions have an obligation to carry out these requirements in a timely and careful manner. Overdue reports not only raise questions about accountability, but divert resources from productive activities to expensive followup activities.

NSF will require compliance with these simplified reporting requirements; final fiscal information through submission of the FCTR; information on project results through submission of the Final Project Report. In addition to telephone calls, reminder correspondence, and visits by NSF staff to review grantee recordkeeping problems, the Division of Grants and Contracts will monitor overdue report submissions to assure that these two requirements have been fulfilled on prior, expired awards before new awards are made.

Some NSF awards contain requirements for unique reports or other end products. Special provisions for such requirements are included in the award instrument. Nothing in this Notice should be construed as waiving such provisions.

Finally, the Foundation appreciates the comments and suggestions for additional paperwork improvements in response to Important Notice No. 65. Some of these suggestions have been adopted and will be reflected in future editions of NSF program brochures and the Grant Policy Manual.

Richard Atkinson

Richard C. Atkinson
Director

Attachments

NATIONAL SCIENCE FOUNDATION
Washington, D.C. 20550

FINAL PROJECT REPORT
NSF FORM 98A

PLEASE READ INSTRUCTIONS ON REVERSE BEFORE COMPLETING

PART I–PROJECT IDENTIFICATION INFORMATION

1. Institution and Address	2. NSF Program	**3. NSF Award Number**
	4. Award Period From To	**5. Cumulative Award Amount**
6. Project Title		

PART II–SUMMARY OF COMPLETED PROJECT *(FOR PUBLIC USE)*

PART III–TECHNICAL INFORMATION *(FOR PROGRAM MANAGEMENT USES)*

1. ITEM *(Check appropriate blocks)*	NONE	ATTACHED	PREVIOUSLY FURNISHED	TO BE FURNISHED SEPARATELY TO PROGRAM	
				Check (✓)	Approx. Date
a. Abstracts of Theses					
b. Publication Citations					
c. Data on Scientific Collaborators					
d. Information on Inventions					
e. Technical Description of Project and Results	▨				
f. Other *(specify)*	▨				

2. Principal Investigator/Project Director Name *(Typed)*	3. Principal Investigator/Project Director Signature	4. Date

NSF Form 98A (5-78) Supersedes All Previous Editions

Form Approved OMB No. 99R001

INSTRUCTIONS FOR FINAL PROJECT REPORT
(NSF FORM 98A)

This report is due within 90 days after the expiration of the award. It should be submitted in two copies to:

National Science Foundation
Division of Grants and Contracts
Post-Award Projects Branch
1800 G Street, N.W.
Washington, D.C. 20550

INSTRUCTIONS FOR PART I

These identifying data items should be the same as on the award documents.

INSTRUCTIONS FOR PART II

The summary (about 200 words) must be self-contained and intelligible to a scientifically literate reader. Without restating the project title, it should begin with a topic sentence stating the project's major thesis. The summary should include, if pertinent to the project being described, the following items:

- The primary objectives and scope of the project.
- The techniques or approaches used only to the degree necessary for comprehension.
- The findings and implications stated as concisely and informatively as possible.

This summary will be published in an annual NSF report. Authors should also be aware that the summary may be used to answer inquiries by nonscientists as to the nature and significance of the research. Scientific jargon and abbreviations should be avoided.

INSTRUCTIONS FOR PART III

Items in Part III may, but need not, be submitted with this Final Project Report. Place a check mark in the appropriate block next to each item to indicate the status of your submission.

a. Self-explanatory.
b. For publications (published and planned) include title, journal or other reference, date, and authors. Provide two copies of any reprints as they become available.
c. Scientific Collaborators: provide a list of co-investigators, research assistants and others associated with the project. Include title or status, e.g. associate professor, graduate student, etc.
d. Briefly describe any inventions which resulted from the project and the status of pending patent applications, if any.
e. Provide a technical summary of the activities and results. The information supplied in proposals for further support, updated as necessary, may be used to fulfill this requirement.
f. Include any additional material, either specifically required in the award instrument (e.g. special technical reports or products such as films, books, studies) or which you consider would be useful to the Foundation.

Fill out and attach to original copy of *formal* proposal *only* if prospective grantee organization has not received an NSF grant within the past 2 years.

APPLICANT MANAGEMENT AND ORGANIZATION CARD

TO BE FILLED OUT BY THE NATIONAL SCIENCE FOUNDATION

Date Received ____________ Proposal Number ____________

TO BE FILLED OUT BY THE PROPOSER

Name of Institution ____________
Name of Project Director ____________

Name of Director of
Sponsored Programs (or equivalent) ____________

Telephone Number ____________

Note: To be completed only if the proposing organization has not received an NSF grant within the previous two years.

Address this card to the authorized institutional representative. Insert Institution name and Program Director's name next to Submitted By and Cite Project Title. NSF will note date received and proposal I.D. No.

DATE:
SUBMITTED BY:
PROPOSAL I.D. NO.:
PROPOSAL TITLE:

The National Science Foundation acknowledges receipt of a proposal from the above applicant which has been assigned the proposal number indicated. Please use this number in all future correspondence.

A separate acknowledgment is being sent to the individual named above.

Central Processing Section
Division of Information Systems

F.L. 23 (5-78)

DATE:
PROPOSAL I.D. NO.:
PROPOSAL TITLE:

Address this card to the project director. Insert proposal title. NSF will note date received and proposal I.D. No.

Your proposal has been received by NSF and has been assigned to this program for evaluation. Please refer to the above number in all future correspondence.

Consideration of proposals requires about six to nine months. If more time is needed, you will be notified. After a decision has been made by NSF on a proposal, anonymous verbatim copies of reviewers' comments are available to the principal investigator upon request.

A separate acknowledgment is being sent to your institution's business office. If you have any questions about the status of your proposal, please contact us.

PUBLIC UNDERSTANDING OF SCIENCE
NATIONAL SCIENCE FOUNDATION
WASHINGTON, D.C. 20550

F.L. 24 (5-78)